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ABSTRACT

A self-observation training program was developed for teachers. After the program was pretested with a group of teaching interns, the effects of self-observation training on selected teacher and student behaviors were assessed with two experienced elementary teachers. Changes in teacher contingent praise, positive nonverbal responses, and negative commands were examined using a multiple baseline design. Self-observation was found to be frequently associated with the increases in positive teacher behaviors when those behaviors were self-observed. Teachers were moderate to high in the accuracy of self-observation. Self-observation by teachers was associated with positive change in certain student behaviors. In general, the effects of self-observation were not maintained after teachers discontinued observing and recording their behavior. (Author)

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Training Teachers Through "Behavioral Self-Observation"

Session 2.09

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THE DEVELOPMENT AND EVALUATION OF A SELF-OBSERVATION TRAINING PROGRAM FOR TEACHERS

Behavioral self-observation, or self-monitoring, is a set of procedures whereby individuals gather data on their own behavior, chiefly in naturalistic settings (Thoresen, Hubbard, Hannum, Hendricks, & Shapiro, 1973a, 1973b; Thoresen & Mahoney, 1974). These procedures have considerable relevance in psychotherapy and education. Not only is self-observation an economical means of collecting data of interest to clinicians and researchers, but it also is the only means of gathering information on certain classes of behavior such as covert or private events. Evidence exists that self-observation can also be a useful behavior change technique in itself in certain situations (Thoresen & Mahoney, 1974). Studies have investigated the accuracy and reliability of self-observation as well as its effects on behavior. Kazdin (1974), after reviewing the self-observation literature, concluded that few studies have shown dramatic effects of self-observation on behavior and that the effect of self-observation typically attenuate with time. He further noted that change resulting from self-observation does not depend upon accurate or reliable reporting on the part of the subject and that highly reliable self-observation does not insure behavior change in the absence of other contingencies.

Recently the use of self-observation procedures in psychotherapy and education has accelerated with the increased use of self-management stra-

tegies (Thoresen & Mahoney, 1974). Because self-management programs require clients to carry out their own change program based on sequential data, a self-observation component is usually involved.

To date, few standardized programs to train behavioral self-observation skills have been reported (e.g., Thomas, 1971). The present study examined the following questions:

1. Is teacher self-observation associated with changes in the rates of the behaviors under self-observation?
2. To what extent are teachers accurate in self-observing their behavior in the classroom?
3. Is teacher self-observation associated with changes in student behavior?
4. How do trainees rate the program in terms of clarity, usefulness, and enjoyment?

Method

Sixteen interns in the Stanford Secondary Teacher Education Program volunteered for the self-observation training program as part of an elective course. Interns completed the four self-observation skills (discriminating, counting, charting and evaluating data) in three two-hour sessions on separate days. Interns completed rating scales on five dimensions such as clarity of training materials at the end of each session. The program used a training manual, videotapes and audiotapes, and role-playing materials. The program was subsequently revised based on the ratings of interns.

Following this, two experienced volunteer elementary teachers participated in the study. A team of two trained classroom observers were placed in their classrooms to record teacher and student behaviors. The teachers were told that the observers were only recording student behavior. The observers collected data for 45 minutes every day in the morning in each classroom. A total of 35 and 37 days of classroom observation were made for the two teachers.

Dependent Variables

Three teacher behaviors were observed: (1) contingent verbal praise, in which approval was given to a student or group of students for their academic or social behavior, (2) positive nonverbal behavior, in which approval was given to a student via physical contact such as hugging a student or patting him, and (3) negative commands, in which the teacher conveyed an implicit threat to a student or group of students if they did not comply with a stated command. Thus two positive teacher behaviors and one negative teacher behavior were observed.

Four student variables were also observed: (1) inappropriate verbal behavior such as yells, swearing, and talking without permission, (2) inappropriate nonverbal behavior such as hitting, slamming books, and ripping paper, (3) on-task behavior, in which the student was observed to be engaged in the assigned task, and (4) classroom noise level in decibels.

A time-sampling format was used in which the 45-minute daily observation period was divided into 10-second segments. To insure that external observers were synchronized (recording in the same segment), the two observers were linked to an audio cassette tape player via earphones.

The tape contained the numbers 1-135, each of which was followed by a 10-second observation period. The end of each observation period was signaled by the word "rest." The rest period lasted 10 seconds, and was designed to allow the observer to locate the next student. The numbers on the tape corresponded to numbers on the observation form.

Student behaviors were observed in alternating 10-second segments. In a typical 45-minute session, 135 student observations were made. Each day five children were selected randomly from the classroom. Observers memorized the names of the children during observer training sessions with the aid of class photographs. One child was observed for 10 seconds; during the 10-second rest period, the next child was located. Thus during the 135 segments of each day, each child was observed 27 times.

"On-task behavior" required attention to the task during the full 10 seconds and was therefore recorded on a dichotomous basis while frequency counts were made of other student behaviors. Noise level was read from a decibel meter and recorded at the end of each 10-second segment. The meter was suspended from the ceiling in the center of the room.

The three categories of teacher behavior were observed in continuous 10-second segments. Thus each day a total of 270 observations were made.

Interobserver reliability. Reliability checks were made by a fifth observer who alternated daily between the two classrooms. The reliability observer observed 30 segments of student behavior in one classroom each day and then observed the teacher in the other classroom each day.

Reliability was determined by dividing the number of agreements by the number of agreements plus disagreements.

Design. A single subject, multiple-baseline research design was employed. Following a baseline period in which student and teacher behaviors were observed, the two teachers were trained in self-observation skills. The teachers then self-observed each teacher behavior in three successive, seven-day phases. The design of the study is presented in Figure 1.

Insert Figure 1 about here

The self-observation procedure consisted of four operations: (1) noticing the behavior, (2) counting it with a specially designed two-channel wrist counter, (3) entering the count on a chart at the end of the period, and (4) analyzing the trend of the data at the end of each phase.

Teaching interns who pretested the self-observation training program evaluated it positively on all dimensions. They found the program to be clearly presented, enjoyable, satisfying and useful.

The effects of teacher self-observation was assessed by comparing the daily rates of the three teacher behaviors during self-observation with rates before and after self-observation. Data were analyzed using the median-slope method (White, 1972; Thoresen & Anton, 1973). This procedure employs a median-based regression line for each phase. Regression lines are compared between adjacent phases for significant changes. Of concern are changes in performance between phases. Change

was considered in terms of comparing the slope or line of progress between phases and the step or immediate effect of treatment for phases. In addition, the overall change (Slope and Step) of phases were compared. The nonparametric binomial test was used to determine the significance of these changes.

Data for positive nonverbal behavior are presented in Figure 2.

Insert Figure 2 about here

Results of binomial tests are presented in Table 1. Data is from the external classroom observers.

Insert Table 1 about here

A statistically significant increase in positive nonverbal behavior was found during self-observation for Teacher 2; further, this behavior significantly decreased when self-observation was discontinued. For Teacher 1, self-observation had an immediate effect (Step) but failed to differ in general from the baseline phase.

Data for contingent verbal praise are presented in Figure 3. Binomial

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Insert Figure 3 about here

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results are presented in Table 2. Teacher 2 showed a significant immediate increase (Step) but the direction or slope of change for the self-observation phase was decreasing. In contrast, in the post-self-observation

In one classroom, inappropriate verbal and nonverbal behavior decreased during the self-observation of contingent verbal praise and negative commands, while inappropriate nonverbal behavior decreased during the self-observation of positive nonverbal behavior. Student on-task behavior increased during self-observation of contingent verbal praise and negative commands. There was a significant decrease in noise level during the self-observation of positive nonverbal behavior and negative commands.

In the second classroom, there was a decrease in inappropriate verbal behavior during the self-observation of negative commands, and inappropriate nonverbal behavior decreased during the self-observation of positive nonverbal behavior. On-task behavior increased during the self-observation of the positive nonverbal behavior and negative commands. Noise level decreased during the self-observation of contingent verbal praise.

Observer Reliability

Daily percentages of agreement among the classroom observers ranged from 9C to 100 percent. The mean percentage of agreement for all phases was high. 98 percent.

Several comments can be made about the effects of teacher self-observation on selected teacher and student behaviors.

1. Teacher self-observation is frequently reactive, i.e., self-observation is often associated with changes in the rates of the behaviors under self-observation. Reactivity is often in the form of an immediate change in the self-observed behavior in a positive direction. Self-observation was associated with a significant increase in Contingent

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Insert Table 2 about here

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phase, the slope differed significantly while the step did not. Teacher 1 was increasing her praises during the baseline phase. Self-observation, therefore, failed to alter significantly this trend. However, an abrupt reduction took place after self-observation was discontinued.

Accuracy of Self-Observation

Accuracy of self-observation was found by comparing the teacher's daily count with that of external observers. Figure 4 presents the daily percentage of agreement between the teacher and observers. The data

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Insert Figure 4 about here

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suggest that the accuracy of self-observation was highly variable. Teacher 2 was clearly more accurate than Teacher 1. Both teachers indicated that they tended to forget to self-observe when there were distractions in the classroom. The accuracy of self-observation was moderate to high.

Effects of Teacher Self-Observation on Student Behavior

There were mixed changes in student behavior during phases in which teachers self-observed. The trend, however, was positive. Positive changes in student behavior occurred in 12 self-observation phases, while negative changes in student behavior were observed in 5 phases. No change was evident in 7 phases. Thus, student behavior was observed to change in a positive direction 50% of the time that teachers self-observed.

Verbal Praise and Positive Nonverbal Behavior by Teacher Two, while self-observation was associated with a significant increase in Positive Nonverbal Behavior by Teacher One.

2. The reactive effects of self-observation are often temporary. Self-observation was associated with an immediate increase in Teacher Two's Contingent Verbal Praise and Teacher One's Positive Nonverbal Behavior. However, almost all behaviors significantly changed after self-obsevation was discontinued.

3. The accuracy of self-observation in a classroom setting is variable, depending on the behavior under observation and the situational context in which it occurs. In the present study teachers who were trained in a six-hour workshop in self-observation skills attained accuracy percentages ranging from a mean of 41 percent per phase to a mean of 88 percent per phase.

4. Self-observation of several teacher behaviors was associated with changes in student behaviors; 50 percent of the time, self-observation was associated with positive changes in student behavior.

Kazdin (1974) in reviewing the self-observation literature concluded that in certain situations self-observation has positive effects on the behavior under observation. He further noted that the reactive effects often attenuate with time, and that the reactivity of self-observation does not depend on accurate recording. The data from the present study generally support these conclusions. Although self-observation was associated with increases in two classes of positive behavior, it did not influence a class of negative verbal behavior. Reactive effects of self-observation attenuated with time in two instances and did not in-

fluence a class of negative verbal behavior. Reactive effects of self-observation attenuated with time in two instances and did not in two other instances.

Compared to two pilot studies (Thoresen, Hubbard, Hannum, Hendricks, & Shapiro, 1973a, 1973b), self-observation in the present study was not as reactive. This reduced reactivity may be due to differences in the training experience and the experimental procedures. The training of self-observation in both pilot studies was done by an experimenter who administered instructions, supervised role-plays and played videotapes for the subjects. Further, a physically present trained leader conducted the training. In the present study, training was done by means of a self-contained training program. The teachers trained themselves; the only interaction was among the participants. The latter method of training has the advantage of being portable and relatively standardized. However, a leaderless training program contains fewer opportunities for social influence processes to operate (Orne, 1969). If trainees are exposed to a group leader who is identified with the experiment, the leader's presence might represent a demand characteristic that is not present in the present self-observation training program. Clearly, additional studies are needed to clarify further the effective characteristics of self-observation training and the effects of self-observation on relevant human behavior. The present study is a beginning effort in that direction.

References

Hendricks, C. C. Treatment of nail-biting by systematic self-observation: A case study. Unpublished manuscript, Stanford University, 1972.

Hendricks, C. C., & Hubbard, D. R. Training manual for self-observation. Unpublished manuscript, Stanford Center for Research and Development in Teaching, Stanford University, 1972.

Kazdin, A. M. Self-monitoring and behavior change. In M. J. Mahoney & C. E. Thoresen (Eds.), Self-control: Power to the person. Monterey, Calif.: Brooks-Cole, 1974.

Orne, M. T. Demand characteristics and the concept of quasi-controls. In R. Rosenthal & R. Rosnow (Eds.), Artifact in behavioral research. New York: Academic Press, 1969.

Thomas, D. Preliminary findings on self-monitoring for modifying teacher behaviors. In E. Ramp & B. Hopkins (Eds.), A new direction for education: Behavior analysis. Lawrence: University of Kansas, 1971.

Thoresen, C. E., & Anton, J. L. Intensive counseling. Focus on Guidance, 6(2), October 1973.

Thoresen, C. E., Hubbard, D., Hannum, J., Hendricks, C., & Shapiro, D. Behavioral self-observation training with a nursery school teacher. Stanford Center for Research and Development in Teaching, Research and Development Memorandum No. 110, Stanford University, 1973a.

Thoresen, C. E., Hubbard, D., Hannum, J., Hendricks, C., & Shapiro, D. Self-observation training with a nursery school teacher. Unpublished manuscript, Stanford Center for Research and Development in Teaching, Stanford University, 1973b.

Thoresen, C. E., & Mahoney, M. J. Behavioral self-control. New York: Holt, Rinehart and Winston, 1974.

White, O. A manual for the calculation of the median-slope. Eugene, Oregon: Oregon Resource Center for Handicapped Children, 1972.

TABLE 1

Binomial Test Probability Values for Overall, Slope and Step Changes between Pre-SO, SO and Post-SO Phases: Positive Non-Verbal Behavior

Teacher 1			
Phase	Overall	Slope	Step
Pre-SO/SO	.227	.227	.0078
SO/Post-SO	.000061	.000061	.089
Teacher Two			
Phase	Overall	Slope	Step
Pre-SO/SO	.0078	.0625	.0078
SO/Post-SO	.0067	.000061	.000061

TABLE 2

Binomial Test Probability Values for Overall, Slope and Step Changes between Pre-SO, SO and Post-SO Phases: Contingent Verbal Praise

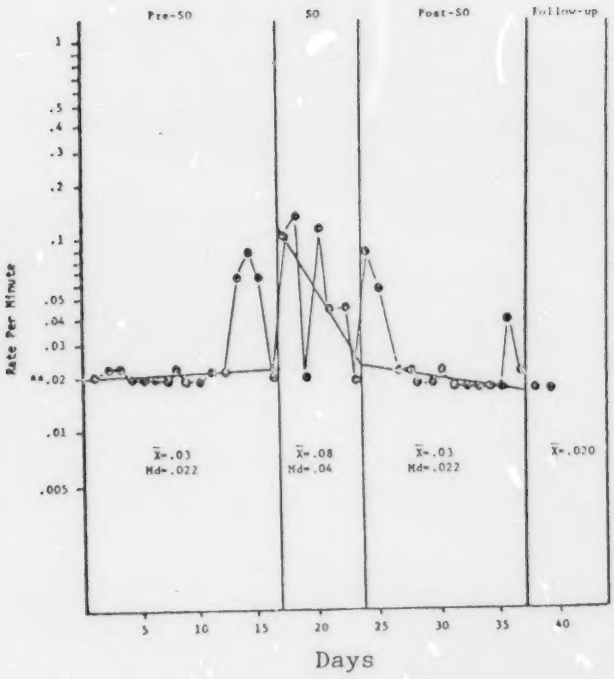
Teacher 2			
Phase	Overall	Slope	Step
Pre-SO/SO	.227	.227	.227
SO/Post-SO	.00000047	.00074	.00011
Teacher Two			
Phase	Overall	Slope	Step
Pre-SO/SO	.500	.0625	.0078
SO/Post-SO	.0036	.0392	.332

Figure Captions

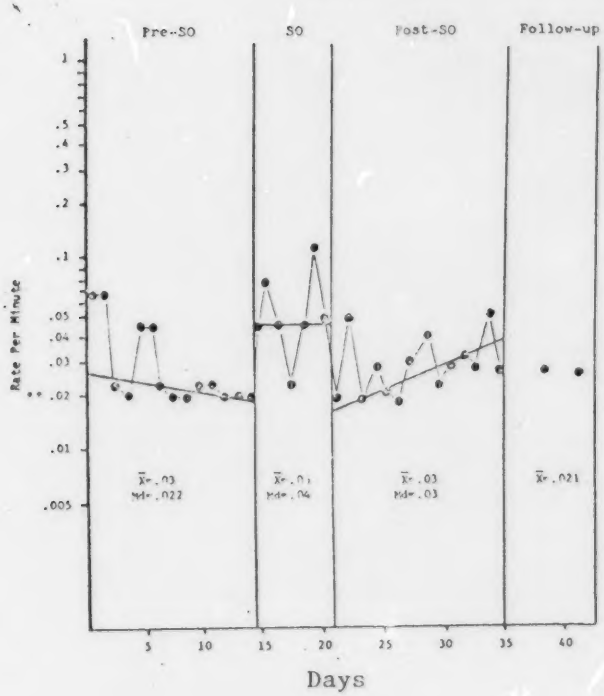
1. Diagram of overlapping treatment phases (multiple baseline).
2. Rate of positive nonverbal teacher behavior before, during and after self-observation: Teachers 1 and 2.
3. Rate of teacher contingent praise before, during and after self-observation: Teachers 1 and 2.
4. Accuracy of teacher self-observation: Teachers 1 and 2.

<table>
<tr><td>Teacher Contingent Verbal Praise</td><td>Baseline (days)</td><td>Train-ing (days)</td><td>Self-observ. (days)</td><td colspan="3">Baseline (days)</td><td></td></tr>
<tr><td>Teacher Positive Nonverbal Behavior</td><td colspan="3">Baseline (days)</td><td>Self-observ. (days)</td><td colspan="2">Baseline (days)</td><td>Followup</td></tr>
<tr><td>Teacher Negative Commands</td><td colspan="4">Baseline (days)</td><td>Self-observ. (days)</td><td>Baseline (days)</td><td>(days)</td></tr>
</table>

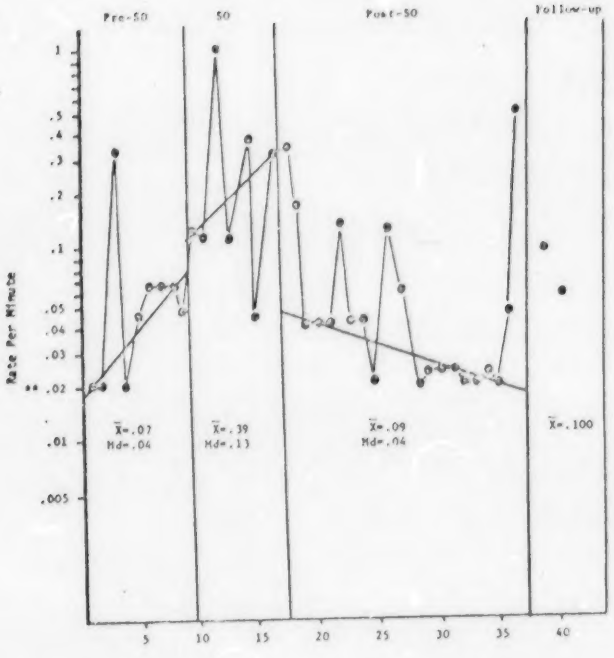
Teacher 1



Teacher 2

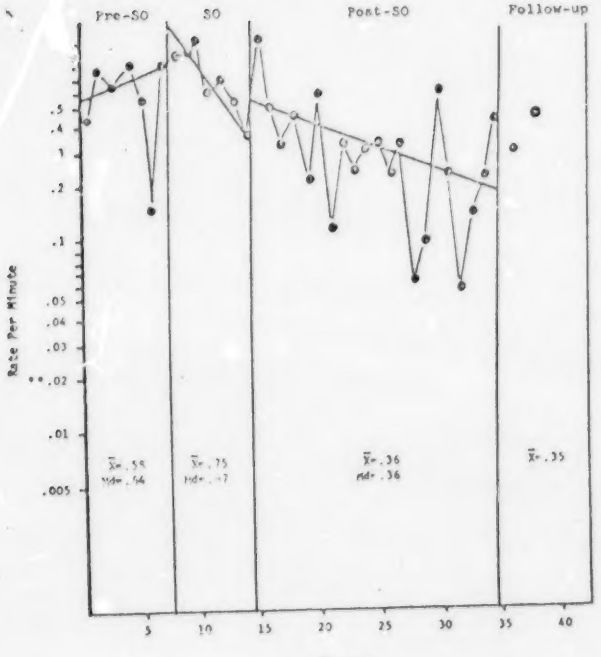


Teacher 1



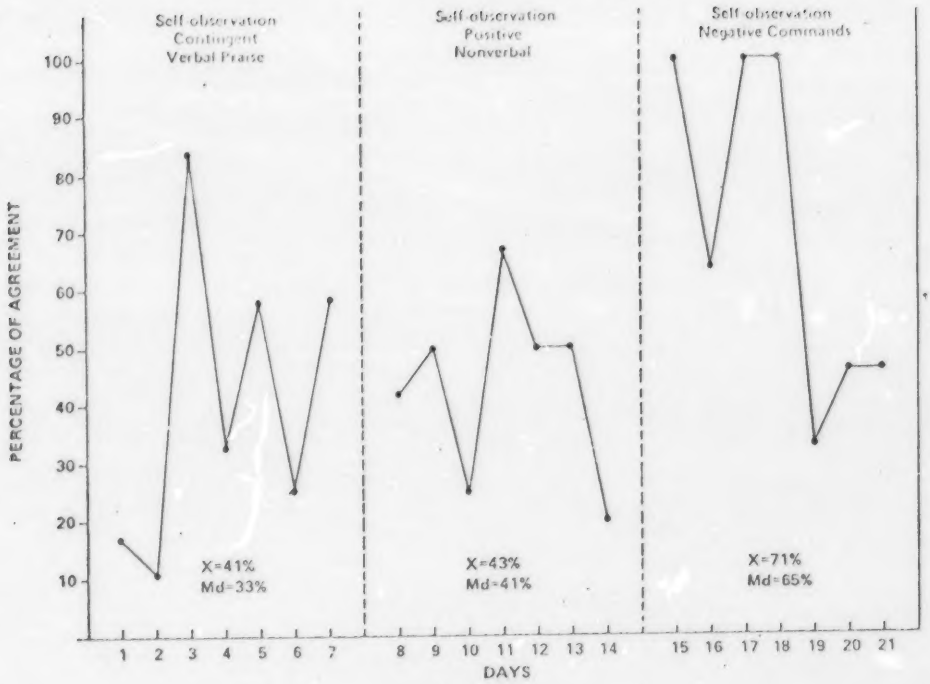
Days

Teacher 2



Days

Teacher 1



Teacher 2